HAIR DISORDERS

HAIR AGEING IN A CAUCASIAN POPULATION: CLINICAL AND INSTRUMENTAL CHARACTERIZATION

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Introduction: Ageing changes undoubtedly occur in hair and scalp, possibly overlying and amplifying clinically apparent alopecia, thus making discrimination of these changes difficult.

Objectives: To identify intrinsic hair ageing effects on a Caucasian population, with clinical and instrumental descriptors.

Material & method: A Western European non-alopecic population of 60 women, and 87 men split into 3 age groups: 25-35, 60-70 and 70+ was recruited.
Clinical assessment included global hair and scalp description, standardized photographs, and self-assessment of Quality of Life (QoL).
Hair growth parameters and physical properties were assessed by phototrichogram (PTG), laser micrometer and extensometer techniques, on 2 areas
Statistical comparison used the Kruskal-Wallis and Wilcoxon tests, and ANOVA depending on the data.

Results: With age, we observed ($p<0.05$):
Clinically, a decrease in hair density and thickness, significant only in men, and a low impact on QoL.
Instrumentally, for both genders, an increase of white hair density, a decrease of total density, thin hair density (<40µm), regrowth, no differences for the ratio of anagen to telogen (A/T).
Mechanical resistance, only measured in the female group, decreased reflecting a weakening of hair fiber while porosity increased meaning a loss of cuticle barrier function. In the male group, the cross-sectional area decreased.

Conclusion: Hair ageing is characterized by the maintenance of a homogeneous but reduced hair density over the scalp, especially thin hair density, a weakening of the fiber

resistance, a greying phenomenon, no significant changes in the A/T ratio, remaining close to the limit of normal value, no significant impairment of QoL. We observed little difference with gender, but hair ageing seems to start earlier in men than in women.
If ageing has a significant impact on scalp and hair, it appears to stand out from an androgenetic phenomenon even if the difference is lower in the male population.